

# FLORIDA HIGHWAYS

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Project 604—Road 4—Dixie Highway, South End of Allanwood.

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**Vol. 3**

**MAY, 1926**

**No. 5**

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Per Year**

**Published by the State Road Department**

**Single Copies  
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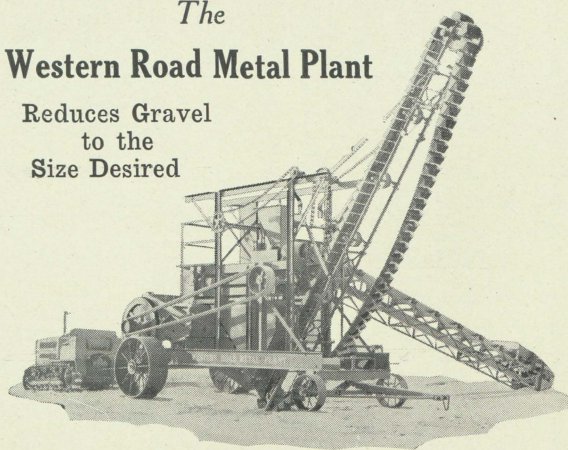
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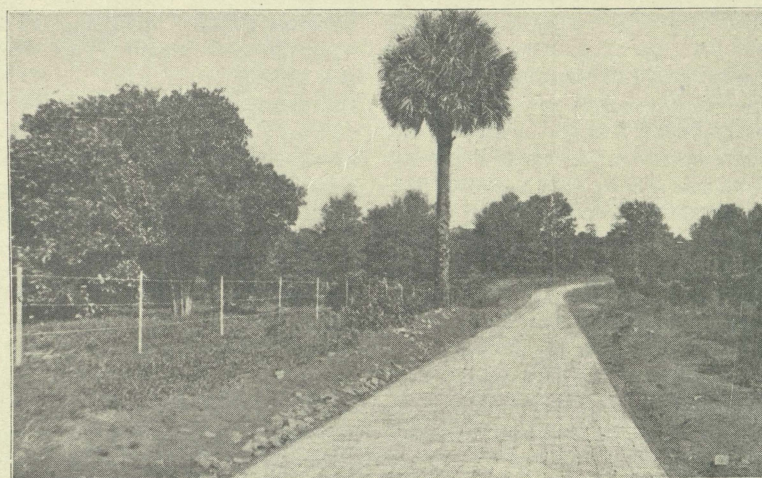
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# FLORIDA HIGHWAYS



Vol. III

MAY, 1926

No. 5

## The Need For More Highways

By L. I. HEWES

A Paper Presented at the Annual Convention of the Contractors' Association of Northern California, at San Francisco, December 18th, 1925

Deputy Chief Engineer, Bureau of Public Roads

**H**IGHWAY construction and upkeep has only one end, namely, to serve transportation.

Highway transportation in America today is measured by the presence of 20,000,000 motor vehicles, and on an average of 14 miles travel per gallon of gasoline there would result an annual average radius of travel of not less than 6500 miles. This is a tentative figure. In California the average is higher, probably 7000 miles. The annual operating bill for the country is doubtless close to \$9,000,000,000; it may be more. The annual expenditure for all rural highway purposes is therefore about 10 per cent of the total bill of \$10,000,000,000 for highway construction, upkeep and operation. It is this high operating cost, which is nine times the cost of construction and upkeep, which shows clearly the need for more highways.

These traffic figures take no account of the reason for the presence of 20,000,000 motor vehicles upon our highways. It is not the business of the engineer nor of the contractor to investigate at this time the economic or philosophical principles which cause the presence of these motor vehicles and the huge bill for their operation. We are confronted with the condition, and to engineers and contractors that condition demands action. We are concerned with the direct

question of reducing the operating bill and ultimately of reducing the entire highway transportation bill, both for operation and construction and upkeep. We must look forward to the time when the highways will require more upkeep and less for construction. But we must first look forward to a reduction of the \$8,000,000,00 difference between operation and upkeep. However, since the rate of increase of automobiles and of the wealth in the country constantly changes the total annual figure, it is perhaps better to say that we look forward to a reduction in the 9:1 ratio now presented by operating costs and highway production costs.

We know as a basic principle that improved highways are reducing the cost of running automobiles and motor trucks. We know that the 5000-mile life of tires has been extended to 15,000 miles or more by highway improvement. It is probable that the wear and depreciation on tires is as directly traceable to poor road conditions as in any other single operating item. We know that the machine wears out faster on poor roads than on good roads, and we have a measurable direct evidence in the behavior of the tires. The operating costs of motor vehicles is made up of a number of items and the cost of these items has been



variously studied. Some of the costs are independent of road conditions. Such for example are items of insurance, garage and interest on investment. Costs for fuel, rubber, repairs and depreciation are directly chargeable to the road.

Very few cars spend less than \$100 per year for gasoline. The total gasoline bill for operating our country-wide motor vehicles is therefore nearly \$2,000,000,000. A large mileage of the operation which requires this gasoline is now on improved highways and it is impossible to segregate economic or advantageous operation from the wasteful or disadvantageous operation. Probably never will we positively fix the loss in excess gasoline costs due to poor highway surface. We are at liberty to guess that some of the motor vehicles do not operate on good highways. We have in America nearly 3,000,000 miles of rural highways and only about 500,000 miles, or one-sixth, can be classed as really improved. We thus have 2,500,000 miles of unimproved highways, and we know that motor vehicles still operate on these unimproved roads. The Federal Aid system of interstate and inter-county highways totals, theoretically, about 200,000 miles, or 7 per cent of the total mileage on record in 1921. It is hoped that this mileage will serve nearly 80 per cent of the people. This mileage is about two-thirds completed, and incidentally 65,000 miles have been built without any Federal Aid. On the main highway system of America it is evident then that there is still to be improved about 78,000 miles and over this unimproved mileage there now operates daily

and at a loss a part of the 80 per cent of the total automobile and motor truck traffic of the country. In other words, approximately one-third of the rural traffic, which is held to be 80 per cent of the total traffic, or about 27 per cent of the major prevailing motor operation, is probably moving at a disadvantage over unimproved roads. So it is consequently quite probable that every one of the 20,000,000 motor vehicles pays a mud gas tax of a little more than  $\frac{1}{2}$  cent per mile upon 25 per cent of its annual operating mileage. If this is so, the annual gas mud tax for the country would be close to \$150,000,000.

To this gasoline loss, which is one of the items that measures the need for more highways, there must be added the loss of rubber, the wear and tear on the machine, the unnecessary repairs, and there then results an approximate measure of the unnecessary operating bill. It is sometimes held that the decrease in gasoline consumption on the improved highway as compared with the unimproved highway gives us the rating factor for the decrease in all costs. It may be that our \$9,000,000,000 would therefore be decreased to about \$6,300,000,000 annually if our highways were sufficiently improved to be operated at the minimum cost. At present we omit consideration of the 93 per cent of rural highways, mostly unimproved, over which 20 per cent of the motor traffic must still move at economic loss for an indefinite period.

A saving of \$2,700,000,000 in annual operating costs of highways seems almost incredible, because the dimensions of the operating bill are themselves hard to



Proj. 19—Road 2—Hamilton County. Lime Rock Base Under Construction Between White Springs and Genoa.



accept, yet in a recent address at Detroit, Mr. Graham, Secretary of the United States Automobile Chamber of Commerce, made the statement that the automobile manufacturing industry was now America's greatest industry. In other words, highway transportation is today served by the greatest manufacturing industry in the country for the rolling stock alone. What then cannot be said of highway transportation in general when we add to the motor production the activity of highway construction itself and its upkeep, and to that add all the other industries of motor transport proper? Truly the task of the engineer to bridge the gap between the science and the industry with respect to highway transportation is enormous. It is not possible that \$2,500,000,000 are yearly wasted because of the lag of highway improvement behind the demand to operate motor vehicles, and isn't it quite evident that we need go no further to demonstrate the need for more highways? We cannot escape the conclusion that the gap between the expenditure for operating the vehicles and the expenditure for establishment and upkeep of the highways must be reduced.

We may apply ourselves intelligently then to the problem of educating the public to the waste that unimproved highways mean. Laws must be passed in keeping with modern conditions. Granting that legislation lags behind science, the responsibility of the engineer and of the contractor, who is the indispensable ally of the engineer, is correspondingly in-

creased. If we examine the setup of money that is going into America's highway today we find that with 1924 as representative, the automobiles paid \$300,000,000 in gasoline tax and license fees and that most of this money was applied to highways, and a large part was administered by State highway officials.

There is no question that legislation is needed in many sections to increase the amount of such fees. It is fair to state that the consumers of automobiles, or the operators, paid also a large Federal excise tax on new machines and parts. In fact the automobile and motor truck operator paid in 1924, on the basis of his total taxes, nearly half the rural highway bill. Without doubt there are many defects in the present diversified system of taxing the motorist. We have been required to set up a budget for highway expenditures with incredible swiftness. In 20 years the automobiles have occurred. They have multiplied our highway expenditures fourfold in 10 years. It is not surprising that there are defects and discrepancies in our tax rates. It is going to require much hard work actually to determine the advantageous and fair rate of taxation for highway purposes that the motorists under all the varying conditions in the 48 States should pay. The outstanding evidence is, however, that the motorist as an individual is not opposing his license and gasoline taxes. He is violently in favor of improved highways and when he is convinced that his taxation is for highway purposes he is content.

(Continued on Page 6)



Looking North at Palm Bay, Proj. 40-A—Road 4—Surface Treated Rock Base.





## Florida Highways

Published Monthly  
Official Publication of the State Road Department

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This magazine is edited in the offices of the State Road Department, Tallahassee, and published monthly. Subscription rate, one dollar per year. Permission is granted to republish, with proper credit, the matter contained herein.

Application has been made for transmission through the mails as second-class matter.

B. A. Meginniss, Attorney for the Department,  
Editor and Business Manager

Volume III                      May, 1926                      Number 5



### MARKING THE ROADS

Someone recently said that next in importance to the construction of good roads is the proper and adequate marking of the highways. Long strides have been made throughout the country in the matter of adopting a uniform system of road markers with the thought that travelers may be advised of directions and hazards without having to ask questions at frequent intervals.

For some years the Joint Advisory Board of the U. S. Bureau of Public Roads and the Association of State Highway Officials has been working on this problem, and has been fostering a sentiment in favor of a uniform system of road markings which would meet the needs of the traveling public. This Board has adopted a uniform code which has been recognized by the United States Bureau of Public Roads. The Road Department of Florida has adopted this system and the Chairman has ordered the signs which will within a short time be placed on the main trunk lines of the State.

These signs, which are of permanent metal character, will intelligently indicate directions, call attention to danger points, and otherwise advise the traveler along the way. By the use of such a system, one who travels the roads of Florida will be enabled to proceed throughout the entire State over its system of trunk line highways without asking a question and with perfect safety as regards curves, angles, etc. The markers will carry the road number, the mileage to given points and the direction. By use of the Department's Road map (which is available for free distribution) in connection with the road markers traveling will be made simple and pleasant. One State boasts that it is harder to get lost in that commonwealth than to find the way in most States. This will be true henceforth of Florida.

Chairman Hathaway believes that a long step has been taken towards making the roads more usable by the installation of these signs, and it has been one of his most insistent demands since he assumed the Chairmanship of the Department that Florida's roads should be properly and adequately marked.

The system has been also adopted by a majority of the States of the Union, so that travelers, wherever they may come from, will have an absolute familiarity with the signs and their meaning. The ultimate objective is to have a system of highway markers which are uniform throughout the United States, and Florida is co-operating to this end.

### FLORIDA TO SPEND ABOUT \$30,000,000 THIS YEAR ON HIGHWAY BUILDING

F. A. Hathaway, Chairman of the State Road Department of Florida, who is aggressively carrying on the highway building of that State, in a letter to the "Manufacturers Record" says: "In our opinion, the counties will probably spend between \$15,000,000

(Continued on Page 12)



## Chairman's Column



## Progress of Department's Work

**T**HE PROGRESS that the State Road Department is making is gratifying to the members of the Department and no doubt to the citizens of the state who have observed its operations. During last summer, fall and winter there was little that could be done other than clearing, grubbing and grading, as the embargo on all railroad lines practically shut off shipments of materials for the building of bridges and hardsurfacing of roads. When it was evident that the embargo was to become general and its termination indefinite, the Department decided upon the policy of concentrating its efforts upon the grading of roads, so that it would be in position to let contracts for hard surfacing and for bridges as soon as the traffic situation cleared up. There has been a gradual improvement in traffic conditions since the first of April, and now the

embargo is removed altogether on all building and road materials.

We have since the situation began to improve and up until now let a large number of paving contracts and several contracts for bridges, while the letting of contracts for grading has continued from month to month, until we have under construction at this time approximately seven hundred miles of road, grading and surfacing, and more than thirty thousand feet of bridges, the construction work under way totaling more than thirteen millions of dollars.

This work is well distributed throughout the state on preferential roads, every section receiving equal consideration.

With favorable weather, labor and material conditions, the Department should show a record of

(Continued on Page 20)



## THE NEED FOR MORE HIGHWAYS

(Continued from Page 3)

There are items of highway improvement that partake of the nature of perpetual community investment and give rise to the question of the fairness to the automobilist if he is required to pay 100 per cent for such items. We can apply, in various ways, time-tried formulae of taxation according to the benefit theory and the faculty theory or the theory of capacity to pay. There is no question that primarily the automobilist is the direct beneficiary of the taxation of his machine when exclusively for road purposes. There is no question that another class of beneficiaries exists, namely, the land owners. There is a great question, however, as to whether or not the group of land owners and group of automobile operators are distinct. As the degree of saturation is approached, as in California today, these two groups tend to become less distinct, in fact to become identical. With a ratio of 3.4 people per motor vehicle in California, it is difficult to imagine that the land-owning class does not also own the automobiles.

Perhaps the question of the method of financing highways, which is after all the form in which the need for more highways is most frequently stated, is not a question as to what name to give the group of taxpayers; it is rather a question of deciding what form to give to the financing. There are able advocates of long-term bonds and there are notable examples of such methods, particularly in New York. The old argument that the road wears out before the bonds mature is scarcely longer tenable. Even if the pavement or hard surface were to considerably depreciate under modern traffic in spite of the best maintenance, it is probable that the appreciation of the well-built and designed roadbed and drainage structures as a public utility for the transaction of business is greater than the incidental depreciation of the surfacing. But many States have found it much cheaper to shorten the term of bond and 20-year deferred serial bonds are consequently more frequent. The grade crossing elimination program is retarded in many States because of the pressure for construction money. Without doubt permanent grade separation structures are reasonably permanent investments and would be a safe asset against loans for highways. The pay-as-you-go plan from automobile revenues could in many cases be wisely supplemented by judicious borrowing for grade elimination structures. Such structures become a part of the highway equipment and they are largely in the nature of an investment of the public at large for comfort and safety. A notable case in point is the recent issue of \$300,000,000 in New York State to eliminate such crossings, with the proviso that the State may advance a part of the railroad's share, to be later reimbursed.

The entire question of taxation and rate making for highway purposes is still in a rather crude stage of development. Experience in borrowing for highways is also comparatively new. Enormous sums have already been borrowed by States and counties and there have been some instances of bad arrangement of the loan but on the whole the expenditure of the proceeds of highways bond issues of all kinds has been economically sound and very profitable.

It should be noted that highway engineers have until recently never had complete measure of highway traffic in any State. In California probably as much or more is known about the volume of traffic in detail, and its characteristics, as is known in any State of the Union. It must be remembered, however, that the highway engineers do not control traffic and they have never had enough money to build enough highways to get ahead of the demand by the public for more service.

The public, moreover, does not see the invisible but real income produced by highway operations, whereas it is highly conscious of the increment of increased taxation for highway bond requirements. It is the very fact that highway borrowing has been profitable that should warn us not to over-extend such method of financing. The cities have been paying a large share of the cost of rural highways and they are beginning to realize that their own special problems require, because of the automobile, constantly increasing expenditure within the city limits in the near future. There must be a wise partition of the funds for highway facilities within and without the cities. There is no question but the cities must have wider and faster roads for motorists. Detroit is already beginning to construct her 80-foot boulevards such as Woodward Avenue. To provide for the discharge of main trunk avenues into the city streets is still an unsolved problem.

In concluding, I wish it were possible to quote from the address of Thomas H. MacDonald, chief of the Bureau of Public Roads, at Detroit. He represented the government at the recent visit of the Pan-American delegates to the road conferences in South America. He came back with a vision of contrast. He told the convention that as a result of the observations of crude and wasteful attempts at highway transportation in the South American countries, he found himself with renewed faith and enthusiasm for the program we are now carrying through. He felt that it was no exaggeration to say that without the progress which has been made during the past two decades in highway transportation and operation, this country would be subject to the same depressing conditions of travel which are presented perhaps in the extreme in these South American republics. There they are still operating largely over trails and unimproved roads, over which are hauled, by oxen, heavy vehicles of great variety through mud and over rocks. Mr. MacDonald made an earnest plea to the American Association of State Highway Officials to at least sustain a sympathetic interest in the development of the South American roads. He was convinced that a fundamental principle of our relations with the Latin-American countries required us to carefully consider not our own superior progress in the matter of highways and other affairs, but rather the great advantage of educating those countries to the need for more highways.—Wyoming Roads.

"Say, Abe, where did you get that stone?" said Larry, pointing to the handsome diamond tie pin he was wearing.

"Vell," said Abe, "I got it from my father. When he died he left \$1,000 to purchase a stone. Vell, that is the stone."



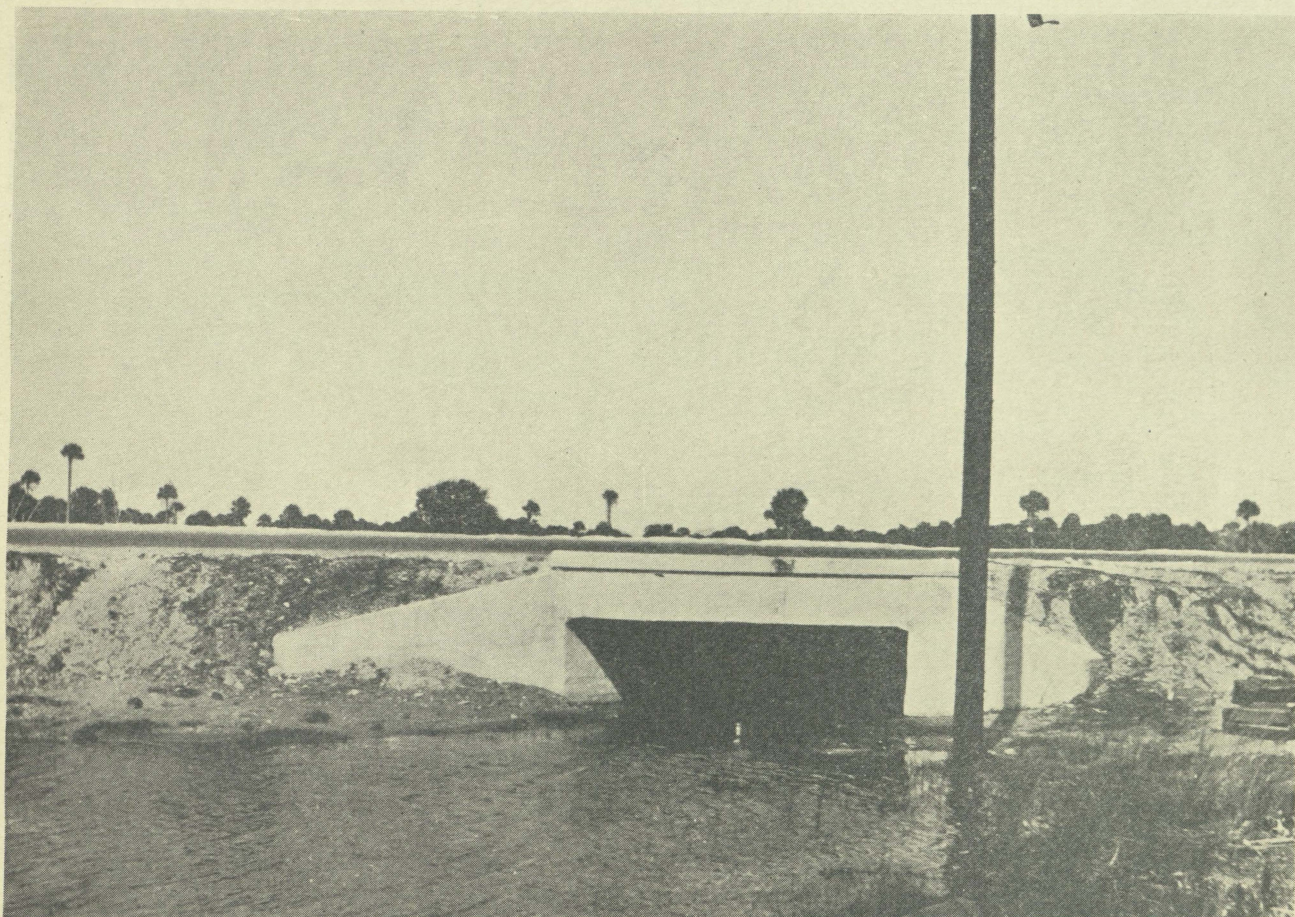
## The Romance of Transportation

By E. R. GREENLAW, in The Louisiana Highway Magazine

THERE are about thirty centuries between Balaam and his ass and Ritchie and his yellow coach. Men may not have changed much since that four-legged mobile spoke but the methods of transportation certainly have. Mr. Balaam has always puzzled me. His ass had the better vision—she could see farther ahead, and she could out-talk him. If “brevity is the soul of wit” she was an artist, particularly when her chauffeur gave her the gas and she cried out “am I not thine ass” and immediately quit firing. But this back-talk—back-fire it is called today—didn’t phase Brother Balaam; he kept trying to crank-her-up until she wrecked him by steering into the wall. Finally he “bowed down his head, and fell flat on his face.” Evidently he was too frightened to run. My reaction under similar circumstances would have been “in swampum, up stumpum.” Prior to this time, according to “Plutarchs Lives,” asses were silent. But, as we intend to recite in this sketch, there have been many changes since then; it is not an uncommon thing to hear asses speak today, and for men to see with clearer vision. Read Mr. John A. Ritchie’s “Co-ordinated Transportation,” which the contemplation

of his “Yellow Coach” inspired him to write, and you will catch a convincing glimpse of a travel de luxe within the reach of man even in this generation.

The difference between the old and the new in transportation methods is easier to portray than that between asses and men, so we will “do our knitting” without further ado. We shall not attempt to review more than a couple of centuries. How men and chattels were transported before Balaam’s day, and during the two thousand eight hundred years following, we will not consider. However, it will be interesting just here to observe that for thousands and thousands of years, in fact, since the world began and up until the early part of A. D. 1700 the ass, the horse, the camel, the elephant and the ox did all that was done in the way of handling freight and passengers on terra firma. Let us get this fixed in “the mind’s eye”—what has happened within the last two hundred years! Two hundred years ago is but yesterday as time goes. Think of it, your great-grandfather was then astride an ox or a horse when he went to the village to attend the trial of a witch. What may we expect in the year A. D. 2000? A portion of the answer is easy—the ox and ox-master and the ass and the ass-master will then be “where



Proj. 597—Road 4—Skew Culvert at West Side of F. E. C. Railway, East Side Indian River Prairie.



the wicked cease from troubling and the weary are at rest."

Two hundred years ago there were only six stage coaches in the entire United Kingdom—and the people were prejudiced against them because only the rich could afford the luxury. Today there are over 70,000 motor coaches in operation in the United States alone, carrying over three billion passengers per annum, with an investment in plant and equipment of over \$296,000,000.00, and even "beggars can ride." Now picture also the London coach of 1745 and compare them to the Fageol and the Yellow of today. And can you realize that these miracles of speed, comfort and endurance have come within the ken of men only within the last EIGHT YEARS!

And how about this: One day in 1745—only 180 years ago—one letter was the sum total of a London mail. But by 1758, 13 years later, many coaches were handling passengers and mail—and the average speed maintained was FOUR MILES per hour. London papers boasted of this remarkably "rapid transit," declaring that "now our citizens fairly fly over the country." Our grand-pa's grand-pa thought such speed was "tempting Providence." What would the dear old fellow think if we could get him into a 1926 motor-coach on a straight piece of our 470,000 miles of improved highways, outside city limits with no traffic officers in sight? What do you think about it? Have you really thought seriously about it? Can any of us comprehend this evolution? A book, and a practical dreamer like Mr. Ritchie,

would but partly sum the situation for us. But nevertheless and notwithstanding we should contemplate the vision because thoughts sooner or later are translated into action and we need to help our lawmakers to keep "fences" off the highways. In 1745 it took two days on a six-horse stage-coach from London to Cambridge—17 miles! It is expected that our legislators of today will open different highways to the 100-horse coach of the hour and that they will give us no occasion to again listen to that ancient excuse "am I not thine ass."

Please get this: In 1802 (124 years ago) John Gray was to be tried for LUNACY for writing and talking about steam superceding horses. Two weeks before the time set for trial a steam locomotive pulling ten tons at five miles per hour over the METHYR TRAMWAY appeared and Mr. Gray was released. Lucky John! "Am I not thine ass." A year or so after this in another part of the country Nicholas Joseph Cughnot came out of a back-yard with a locomotive. It turned over and both he and his locomotive were put in jail by an angry mob which was sincere in the belief that he was interfering with God. "Am I not thine ass." Some of England's best physicians declared that the smoke from these engines polluted the air and produced ague. "Am I not thine ass." By 1805 the SHREWSBURY & CHESTER HIGH FLYER was maintaining an average speed of 3.6 miles per hour during the summer months. Going some! We now have in the good old U. S. A. about 300,000 miles of



Proj. 604—Road 4—Old Cast Iron Syrup Kettle in Front of Allanwood Post Office.



steam and electric railways, and every one of them can beat that fast Texas heifer we have heard so much about—the one that cost Mr. John Hertz, of taxicab fame, a wrist watch, to the writer.

The object of this article is not merely to entertain; its real purpose is to appeal particularly to Louisianians in behalf of highways and their uses. Just how slow or fast we progress in matters of transportation, just how strong and vigorous we make and keep our articles of commerce will depend entirely upon how we approach the problem. If we arm ourselves with real facts and correct figures, if we consider the situation seriously enough to enable us to grasp even a small glimpse of how far good highways and their fair usage go towards helping man in his "pursuit of happiness" we will arouse an enthusiasm and create a statewide sentiment that will not stop short of one of the best and most constructive Vehicle Bills that has yet adorned the labors of a legislature. Let's go!

Off go our hats to our 300,000 miles of steam and electric railways, 26,000 miles of navigable rivers and 3,000 miles of canals BUT off go our coats to our 470,000 miles of improved highways, and we will throw in our shoes if necessary to keep up the present pace of 25,000 to 40,000 miles per annum we are now adding thereto. We have yet about 2,400,000 miles to surface.

Just here is it not well worth while to consider the relative importance of highways to all the other "ways" of transfer? We have today 70,000 motor coaches, 3 million MOTOR TRUCKS and about 17 million automobiles all serving man as busily as "bees in a hive." When we have completed our two and a half million miles more of unimproved highways how many more wealth-creating and distributing units will have been added to the glory of America? And to her enlightenment! Twenty thousand school buses at this very moment are making deliveries of "readin', ritin', and rithmetic."

The editor of this Magazine, which the Louisiana Highway Commission has dedicated to the cause of good roads for Louisiana, limited "your orator" to a certain number of lines. Accordingly "time is up," but before the curtain falls I wish to offer to any one who desires some good "ritin' and readin' and rithmetic" on this subject a copy of "COORDINATION TRANSPORTATION", "Future of the Motor Coach" or "DOES THE MOTOR TRUCK PAY ITS FAIR SHARE OF TAXES?" by Mr. John A. Richie, President of the Yellow Truck & Coach Mfg. Co., from which essays the writer has, without permission, extracted much data. Mr. Richie closes one of these with this parting shot:

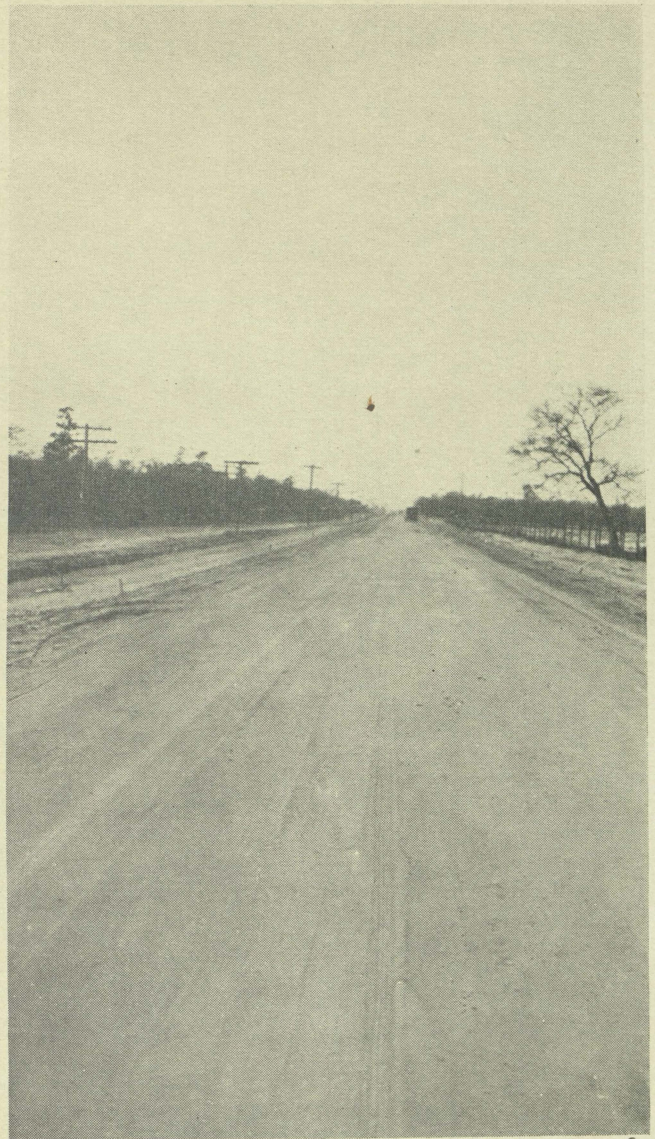
"Coordination and cooperation are more than a sign of the times—THEY ARE THE SEAL OF A NEW EPOCH."

### Joy in the Sunday School

The teacher was talking of kindness to animals, and telling his pupils to be kind to them always.

"I once saw a little boy cut the tail off a cat. Can any boy tell me a passage in Scripture where such a thing is forbidden?"

Hope of the Class: "What God hath joined together let no man put asunder!"



Proj. 567—Road 1—Walton County, Sand Clay.

### Out of the Mouths of Children

A conjuring show fell rather flat recently. The conjurer said, "Now, ladies and gentlemen, I will show you my very latest trick, but to perform it I must ask some boy from the audience to step up here."

Almost at once a boy arose from his place.

"You'll do," said the conjurer.

The boy marched up to the stage.

"Now, my little man," began the conjurer in a loud voice, "you and I have never seen each other before, have we?"

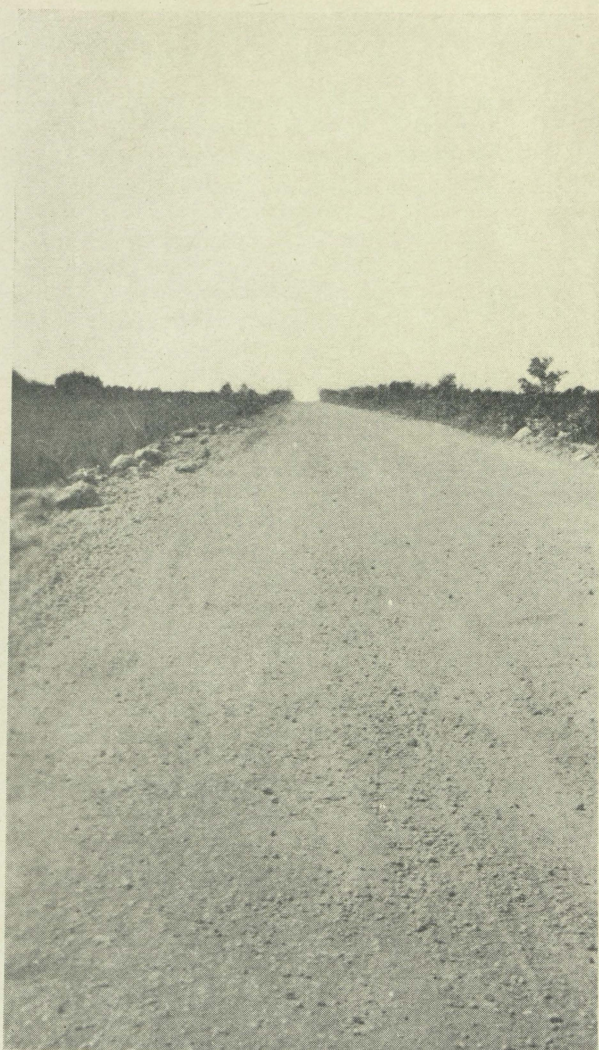
"No, papa," replied the boy.—Pacific Coast Motorist.

### A Giveaway

The Caller (a young man)—"So Miss Ethel is your oldest sister. Who comes after her?"

Small Boy—"Nobody ain't come yet; but pa says the first fellow who comes can have her."—Answer.





aid to an immigrant. All who came did so on their own volition and resources. Others who desire to come must not expect any different treatment. We welcome all homogeneous people who elect to cast their lot with us, but we are not holding out any extravagant promises as a means of inducing people to come our way. The herewith stories, illustrating the remarkable profits made recently in Florida, are not given to imply that you can do as well as those whose stories are given herein, but hundreds of others, just as remarkable as these have been published."

A candid and truthful statement which is not misleading or misrepresenting in the slightest degree. One thing Florida can boast of is that the State officials and most of the county and city officials hew close to the truth and honesty. Here are the subjects: "Florida Takes Inventory;" "What Every Floridian Should Know," by Honorable John W. Martin, Governor of the State. The Governor presents a vivid and graphic bird's-eye view of Florida. "Knowing Florida," by our Commissioner of Agriculture, Nathan Mayo, a story of Florida's resources, the rising tide of valuables furnished the readers with funds of statistical information. "A Beautiful Story of Florida," by H. O. Bishop, followed by Florida lists,

(Continued on Page 18)

### FLORIDA TODAY

The Bureaus of Immigration and Agriculture of the State of Florida have issued a remarkable year book of Florida today. The publication is a great credit to Florida and to the Commissioner of Agriculture, Nathan Mayo, and T. J. Brooks, Director of the Bureau of Immigration. These public officials are not afraid of the truth. They are not telling the world that Florida is all sunshine and everything is a success. Listen to the preface:

"This publication is meant to be informant of the Florida of Today, and to set forth the reasons for the State being so prominently before the public throughout the country. That there are thousands of unusual successes in Florida does not imply that there have been no failures. Thousands have failed in Florida and in every other state. The problem is to match conditions as have the successful ones herein mentioned. No one can underwrite your chances in Florida but yourself. There is no royal road here any more than elsewhere. We do believe that there are more opportunities here for a fair remuneration for the capital invested than anywhere else on the globe at present. What is an opportunity to one is not to another. We cannot tell you where to go nor where to invest. Florida has never furnished any material







This Photograph and the Two on Preceding Page Are the First Views of the Work the Department is Carrying on in Dade County on State Road 27, Popularly Known as the Tamiami Trail.

## Drunken Drivers

(An Editorial from the Oklahoma News)

Determination of the State Highway Commission to make war on drunken automobile drivers calls attention to one phase frequently overlooked of the prohibition question.

Opponents of prohibition base their case largely on personal liberty. What more right, they ask, has the state to tell a man he must not drink intoxicating liquors than that he must not drink coffee, or eat too much meat, or smoke cigarets?

It probably is true that over-eating kills as many men and women as liquor used to do, even in the days when it was flowing most freely. It also is true that some fanatics make out a strong case against the use of tobacco, and others hold that coffee and tea, and even soft drinks, are detrimental to the human body. So if the state is going to protect a citizen against his appetite, why not legislate against over-eating, and against coffee and tobacco and soft drinks, as well as against liquor?

The reason may be summarized in one word: the automobile. Long ago, for reasons of protection, both to themselves and the lives entrusted to their care, prohibition was decreed by American railways. Drunk

on duty was sufficient reason for firing any trainman, and no union rules protested.

But the coming of the automobile has made us all engineers. A drunken driver endangers not only himself, and those in the car, but the folks in every car he passes on the road.

In the old days a man harmed himself and his family when he drank, just as he does now when he overeats. But today, if he owns an automobile, he endangers hundreds. Modern society grows constantly more complex. A man's relations with his fellows are infinitely closer than they were only a quarter of a century ago.

And that's why intoxicants have gone under the ban.

Men's heads have to be clear in this machine age, else they will be destroyed. It's going to take considerable time to adjust ourselves to all these new demands and requirements, but we can't buck against progress.

Every reduction in the price of automobiles, every new mile laid of modern paved roads, makes more inevitable the fact that we shall have to choose between motors and booze. And there isn't a moment's question as to what the choice will be.



## Uncle Sam's Duty Is Clear

The Federal Constitution provides that the nation shall be responsible for certain definite requirements. Among them are the following:

1. Provide for the common defense.
2. Promote the general welfare.
3. Establish post offices and post roads.
4. Regulate commerce among the several States.

Speaking before the Senate Committee on Post Offices and Post Roads in 1921, General Perishing said: "The country road will be of tremendous value in time of war; \* \* \* the roads must be relied upon to obtain the needed food supplies." Ever since the cooperative work began on the building of the Federal-aid highway system all roads constructed with Federal funds have been required to be so constructed that the culverts and bridges shall meet the needs and requirements of the Army. Likewise, when the system was approved the War Department was consulted as to what roads would meet the greatest national need in any line of defense.

Who would try to demonstrate that the condition of the highway has no effect upon the general welfare? Schools, churches, medical service, social betterment—all are tied up in this problem. There is a whole sermon in the "better understanding" between communities and States which has come about by the tremendous increase in interstate travel on the highways. It seems but yesterday when a very limited number felt they could afford the education which alone can come through travel.

From the beginning of the Government, the Postal Service has been a purely national function. Without railroads, the highways and waterways were the sole source of carrying on this work for the people. With the introduction of rural delivery mail service the use of the highway has been greatly augmented. The Federal Government is now using 1,205,572 miles of highway every day in this service, and yet is assisting the States in the improvement of about 200,000 miles. In the use of this mileage 30,060,816 individuals are being served, and yet there are still over 14,000,000 to be added as the service can be extended. Five years ago 43 percent of the rural carriers used horse-drawn

## A Pearl in Every Oyster

A little old man in a faded gray suit and a battered brown derby hat, in South Street, New York City, is the champion oyster opener. He has been at his job through the seasons of forty years. From the time he began this business he has had the idea that he was to find in a shell a pearl so valuable as to furnish him provision for a rainy day. For forty years he has carefully watched every shell he has opened, and has told his intimate friends of his expectation of discovering his prize. He has had a delusion, almost that of a crank, but a pleasant one.

The instinct of hope is so strong in the human heart that almost everybody expects to find a pearl in his oyster shell. This man in his humble occupation found a pearl in his oyster every day in the wages he earned or the profit he made, and if he has supported a family, he has done much better for himself and the world than if he had found the valuable pearl.

The steady occupations of life, however humble, have better provision in them for a rainy day than the accidents of fortune, which are as scarce as jewels in the oysters of a restaurant.—The Louisiana Highway Magazine.

### FLORIDA TO SPEND ABOUT \$30,000,000 THIS YEAR ON HIGHWAY BUILDING

(Continued from Page 4)

and \$20,000,000 for road work, and this department contemplates the expenditure of \$12,000,000."

This expenditure of from somewhere between \$27,000,000 and \$32,000,000, as estimated by Mr. Hathaway, is for the work of highway building in Florida this year. In his letter he says that the counties of the State have issued much more than \$36,000,000 in bonds for highway work, but the total amount of these bond issues will not be spent in the calendar year of 1926.—Manufacturers Record.

vehicles. Today there are but 15 percent using horses. The time involved in delivery of rural mail has been reduced one-half.—American Highways.

## Good Roads Pay Dividends

It is stated on excellent authority that Iowa's rural schools have been closed most of the past winter and early spring because of the deplorable condition of the roads. Iowa taxpayers shied at the first cost of building good roads. For ten years the State has spent a lot of money building "good" dirt highways. Of course these do very well in good weather. But, it is alleged, Iowa has had a hard winter and much of the time since last September the highways of that State have been blocked and farm traffic has been at a standstill.

Perhaps Iowa people have begun to wonder if the winter-blockaded roads haven't cost that agricultural State more than the first cost of really good roads would have been. It is not good policy to spend money on roads that are usable only in fine weather. Perhaps Iowa is learning that roads that bring the State to a standstill, close schools and block highway traffic are

the most expensive roads in the long run; that the cheapest road is the road that can be used every day of the year, and whose utility doesn't depend upon the chance of the weather.

Good roads pay dividends regularly. They enable all classes of citizens to reach the centers of activity in ease and comfort, at the minimum of expense; they promote good citizenship, develop neighborhood and community centers and contribute very largely to the health and happiness of those who travel over their smooth surfaces as well as those who live adjacent to them. In brief, good highways are the safest and best dividend-paying investments people can make. Iowa endeavored to "get by" on dirt roads, but certainly the citizens and taxpayers of that State have not profited by the policy followed.—The Louisiana Highway Magazine.

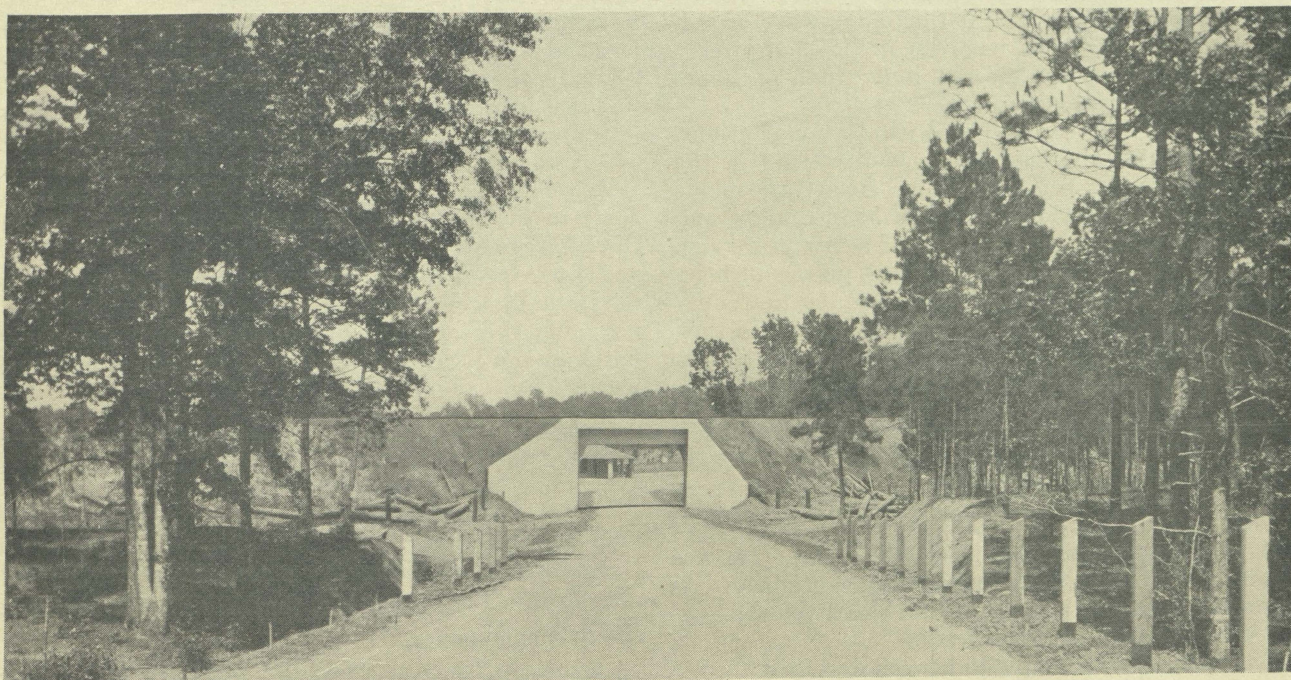




## Concrete Underpass Just West of Marianna

The main trunk line railways of the State are co-operating with the Department under the agreement entered into in 1924 with these carriers to eliminate dangerous railroad crossings. The concrete underpass here shown was built by the Department and the Louisville and Nashville Railroad on State Road No. 1 just west of Marianna. The construction of this

underpass eliminates a dangerous crossing on one of the State's trunk line highways. Besides the L. & N., the parties to the agreement with the Department are: The Seaboard Air Line, the Atlantic Coast Line and the Florida East Coast and their subsidiaries. The east and west approaches are here shown.





## Motor Clubs Convention

**T**HE 800 MOTOR clubs and associations affiliated with the American Automobile Association will hold their annual convention in Chicago on Monday and Tuesday, June 7 and 8, according to an announcement from the national headquarters of the A. A. A.

While the convention, including the committee meetings, will be held at the Palmer House, the Chicago Motor Club, which is one of the strongest units of the A. A. A., will be host to close to 400 delegates who are expected to attend the convention. Every section of the country, it was stated, will be represented at this mammoth gathering of the organized motorists.

In making the official announcement, Thos. P. Henry, who has been President of the Association for three years, said that one of the main items on the agenda of the gathering is that pertaining to the election of officers. According to the headquarters statement, the convention will elect the President, six Vice-Presidents, a Secretary, a Treasurer, an Executive Committee and twenty-one new members of the Board of Directors.

Preceding the Convention proper, the various Boards of the Association will meet, including the Good Roads Board, the National Touring Board and the Legislative Board. Besides submitting reports on the work of the Association and its clubs during the past year, the burden of formulating a platform for 1926 and 1927 will largely devolve on the Boards which are in constant touch with every phase of ownership and operation of automobiles, President Henry declared.

"This Convention," said Mr. Henry, "will be one of the most important since the A. A. A. was founded twenty-five years ago. One reason for this is that the gathering will be more representative of the car owners of the country than any held heretofore. This is due to the fact that 200 motor clubs were organized under the A. A. A. emblem in the last twelve months and close to 200,000 individual members added to the organization.

"It can now be said that with few exceptions, every section of the country is co-operating in the work of the organized motorists. Hence, the plans of the A. A. A. for the future will have a unity and a solidarity that no one dreamed of a few years ago.

"Motor clubs are becoming vital public utilities and car owners everywhere are finding that only through joining them and supporting them will they be in a position to make their wishes effective and to protect their individual interests."

Mr. Henry said that next to the development of safety measures, the crying problem of the moment as far as the car owner is concerned is the need for clarification of the field and the incidence of motor vehicle taxation.

"One need only glance at the map of motor vehicle taxation recently compiled by A. A. A. national headquarters to realize the threat to the car owners in the rising curve of special taxation from year to year. The government has reduced the war excise tax on motor vehicles. But reduction is not enough. The government should get out of the field altogether and the first tax adjustment made by Congress should aim at relieving the car owners of this war burden. At the same time, an effort should be made to secure some degree of national accord on the taxes that the states and the municipalities are to levy. This is the only way of stopping the pyramiding of special taxes out of all proportion to the increase in automobile registration.

"With the passing of the Hoover Conference into history, a large part of the work of carrying out a safety program will devolve on the organized motorist. The A. A. A. was an organization member of the Hoover Conference and there is every certainty that its member clubs will fall into line with its plans both as regards safety and the development of uniform traffic laws for the country as a whole. This is a field in which I look for much progress in the immediate period ahead because of the effective work that A. A. A. clubs have been doing in the local and state field."

The national motoring body, the A. A. A. president declared, will take steps to strengthen its legislative board.

"This step," he said, "is being taken in order that we may be in a better position to meet any untoward tendencies that may develop during the meeting of a great many state legislatures in 1927. Already, there is considerable talk about compulsory liability insurance. From its own studies and from investigations of other responsible bodies, the American Automobile Association feels certain that such a step would be unwarranted. It would be burdensome to the car owner and would in no way serve the interests of safety.

"Other proposals of equally doubtful merit will be agitated from time to time. And it is the business of the organized motorists through their national and local representatives to keep watch and ward."

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### Civilized

A man was stranded on a desert island. He was afraid of cannibals, so he moved very cautiously. As he was climbing up a small hill he heard voices:

"Who in hell trumped my ace?"

The man lifted his eyes to heaven and said:

"Thank God there are Christians on this island!"

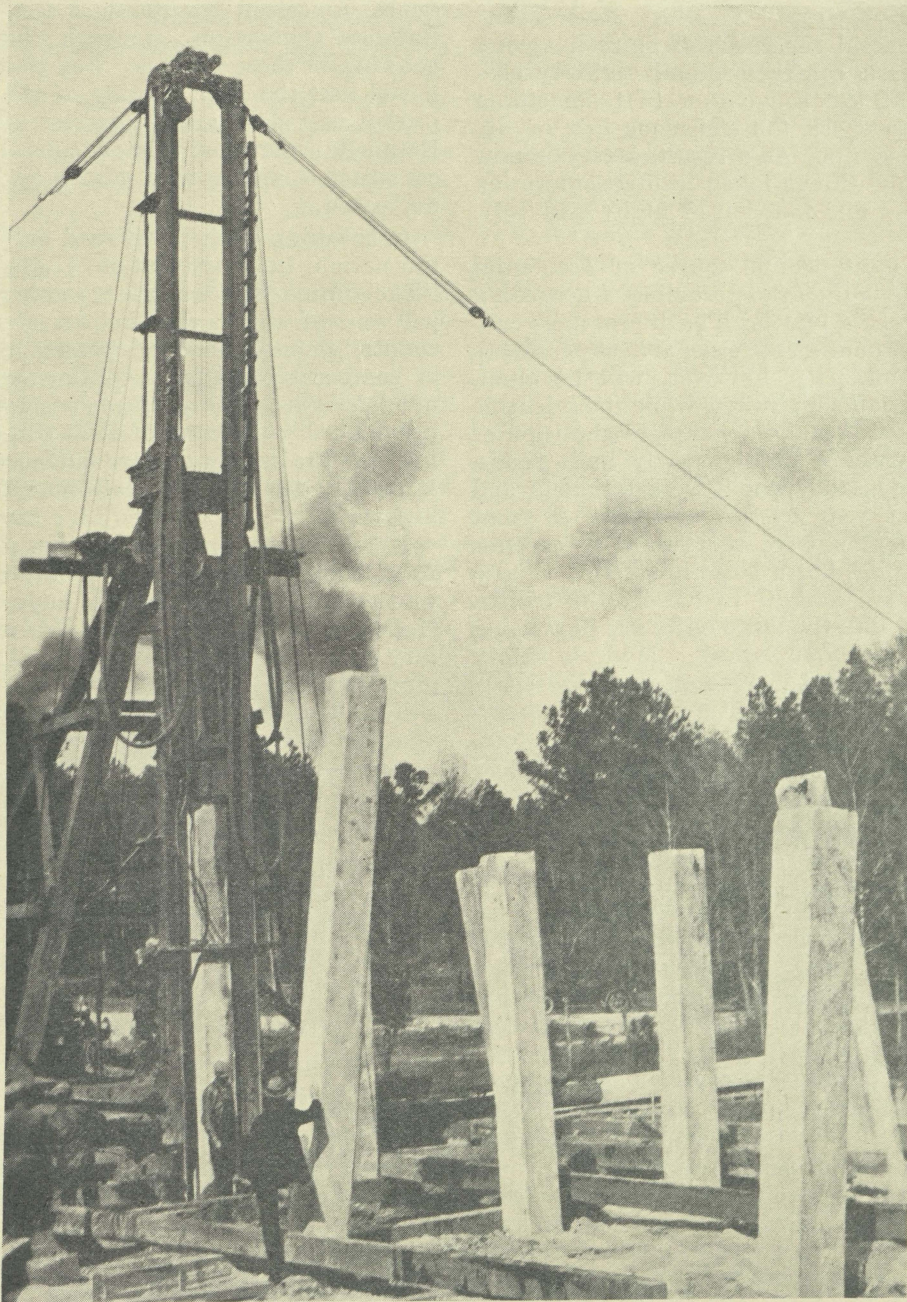
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### His Rake-Off

English Guide (showing places of interest)—"It was in this very room, sir, that Wellington received his first commission."

American Tourist—"Indeed! And how much commission did he get?"—Boston Transcript.





Cemetery? No. Driving Concrete Piles, Proj. 45—Road 1—Suwannee River Bridge.



## National Safety Movement

**A**NATION-WIDE movement for greater safety in the construction of highways will follow in the wake of the American Road Builder's Convention held recently in Chicago, according to H. G. Shirley, President-elect of the organization and Chairman of the Virginia State Highway Commission.

"It was the general consensus of opinion among the 30,000 engineers, contractors and highway officials assembled at the convention that something should be done to check the enormous loss of life in automobile accidents. As a result, safety is now one of the principal things taken into consideration in the construction and location of highways," Mr. Shirley said.

"Perhaps the most prolific source of accidental death to motorists is the grade crossing," according to Mr. Shirley. "In a few cases such crossings cannot be removed without an unreasonable expenditure of money. The majority, however, will be eliminated from the nation's highways, while the scientific location of routes will make a complete abolition of grade crossings possible on the newly built roads.

"Nearly one thousand people were killed in and near Chicago last year by automobiles. A great many of these deaths were the result of careless driving and speeding, but a large number were also caused by roads too narrow to handle the traffic. Highways leading into the large cities are now being planned wider than ever before. Modern safety signals and devices are being adopted in the cities and along the national routes. Curves are scientifically constructed to reduce the possibility of accident,

and steep grades removed where possible to eliminate the dangers of such places.

"This movement in behalf of safety is not confined to the United States alone," said the Virginia highway official. "It was learned from the hundreds of delegates from Canada, Mexico, Panama and the South American countries at the American Road Builders' Convention, that such a movement was fast growing in these nations. For that reason it is believed that the 1927 meeting of the highway organization will show great progress along safety lines. Detailed reports of deaths caused by improperly constructed and routed highways will be greatly decreased.

In speaking of the 1926 road building program of the nation, the President-elect was very optimistic. "The United States registers approximately ninety per cent of all the automobiles of the world. The country should, therefore, possess a highway system of comparative extent. Of the three million miles of highways in the country, a small portion is improved. The program of 1926 will not only greatly increase the system of hard surfaced roads, but will as greatly decrease the death hazards on the present highways."

Mr. Shirley was elected to the presidency of the American Road Builders Association during the convention in January. He will succeed President W. H. Connell, Engineering Executive and Acting Secretary of Highways of Pennsylvania, whose term expires in May. Mr. Shirley was Secretary of the Federal Highway Council before accepting the chairmanship of the Virginia Commission.

## Is Proper Road Paving an Extravagance?

**M**ANY are wont to sigh for the simplicity and economy of the "good old days."

They see the nation headed for the bowwows on a wave of extravagant public expenditure, not realizing that for many of our superior advantages we pay far less—partly because there are more of us—than our ancestors paid for ways that were far from being as pleasant or contributing as much to the happiness and fullness of life.

Take our public roads, for example. In the first years after the colonies became a republic, funds were so meager and the people so poor that the commonwealth could not assume the burden of road building. Instead private companies were formed to build and maintain turnpikes for which service they were authorized to charge a toll for the use of the road.

On June 14, 1796, the first turnpike company in New Hampshire was organized. A schedule of tolls running from one cent per mile for every ten sheep or hogs up to three cents per mile for wagons, stages, private carriages and the like conveyances drawn by horses was legally permitted the company.

These old roads were very poor. Ruts were left unsmoothed; bridges sagged and fell in; vehicles were mired in the mud holes. Yet the toll companies

claimed their returns were so small they could not afford repairs.

Imagine a present-day motorist traveling over one of these roads and being stopped every two or three miles by a gate which he could not pass without paying toll!

Compare this with the cost of traveling on a modern, concrete paved highway. Yet it will surprise many to learn that our modern highway is the cheaper of the two—far cheaper.

A concrete pavement to-day costs about \$27,000 per mile. Grading, draining, fencing, etc., bring the cost of the whole improved road to about \$35,000 per mile, the actual cost depending upon the locality where it is built and the amount of grading required. At 6 per cent. the yearly interest charge on this total cost is \$2,100. The sum which must be put aside each year to replace the pavement at the end of twenty years is \$907. Maintenance may be estimated at \$200 a year. The total yearly cost of a mile of modern concrete highway is then \$3,207.

If an average of only 500 vehicles per day passes over the mile of improved pavement the cost then is only 1.73 cents per vehicle per mile. This is but little more than half what our ancestors used to pay to travel the mud, and dust and ruts of the "good old days."—Maine Motorist.



## Build and Save

Spend money and have it; eat your cake and keep it. No? Well it sort of figures out that way in this matter of building roads where the traffic is heavy.

For instance, how much is the average operating cost per motor vehicle in Maine, including gasoline? Say \$400. Well, there were 147,000 of them registered in Maine last year. Multiply and there's the not inconsiderable sum of \$58,800,000 for operating costs right here at home.

Through the State Highway Department last year there was expended for construction and maintenance of highways and bridges \$6,527,000. Add that to the operating expenses of motor vehicles and get the sum of \$65,327,000. If ten per cent of that could be saved that would be nearly as much as we expended last year for highways and bridges.

Does that sound like a night after the repeal of the Volstead law? That is no dream, nor emanation from a head swathed in a wet towel.

We sometimes wonder about the fellows we see around collecting "data," as they tell us. They really do get together some valuable information.

Out in the State of Iowa the data collectors demonstrated one could drive his car over a paved road more cheaply than over a dirt road; that the saving in gasoline amounted to two and one half cents per mile. Multiply that a few million times and see what you get.

As nearly as could be ascertained the average motor vehicle in this country consumed 509 gallons of gasoline in the year 1918; in 1923, 443 gallons. In Maine for 1924, the returns from the gas tax show the average motor vehicle consumed 410 gallons per car. Improved carburetors and lighter cars may have some small credit in this showing but the greater part is due to better roads.

Any driver of a motor vehicle can comprehend a very noticeable saving in driving over paved as compared with ordinary dirt roads. If he has any comprehension of mechanics he knows the depreciation of his car is much less on the better roads, when they are clear of snow.

It is no idle dream that a saving of \$20 in gas alone is possible for the average motor vehicle, driven on Maine's roads today, from the cost of the gas that would have been required fifteen years ago.

All this does not mean there would be proportionate saving to the country as a whole where expensive roads are built to accommodate small traffic. But, when we consider that in this State 53 per cent of the traffic is over the seven per cent of improved roads, it becomes evident that the cost of having the traffic-burdened highways kept in excellent condition comes back in the savings of the motorist.

Build as good roads as the traffic will warrant and save money!—Kennebec Journal.



An Example of Marion County's Excellent Road Work.



### MICHIGAN JOINS TO HONOR POET IN NAMING HIGHWAY

Michigan will join with Indiana in honoring the memory of James Whitcomb Riley, the Hoosier poet. Trunk Lines M-13 and M-11 will be part of the memorial project in this state. This was decided last week at a meeting of representatives from Indiana and Michigan held in Grand Rapids. In addition to selecting a tentative route a Michigan board of governors consisting of 18 men was elected.

The highway, which will connect Miami, Fla., with Petoskey, may be extended into the upper peninsular, it was stated. A resolution was adopted fixing the route as M-13 from the southern boundary of Michigan to Fife Lake corners, just west of Fife Lake. The route from this point to M-11, a short distance south of Traverse City, will be on the most direct improved state highway. M-11 will be the designated route to Petoskey and possibly to Mackinaw City, which is favored by many as a terminal.—Michigan Roads and Pavements.

### Might as Well Finish

Customer—"I hear Jones has selected six bankers to act as pallbearers."

Richards—"Well, they've carried him for years; they might just as well finish the job."—Nevada Highway News.

### NINETY PER CENT OF WORLD'S AUTOMOBILES REGISTERED IN UNITED STATES

The United States registers approximately ninety percent of all the automobiles of the world. The country should, therefore, possess a highway system of comparative extent. Of the three million miles of highways in the country, a small portion is improved. The program of 1926 will not only greatly increase the system of hard-surfaced roads, but will as greatly decrease the death hazards on the present highways, according to President-Elect Shirley of the American Road Builders' Association.

### FLORIDA TODAY

(Continued from Page 10)

its possibilities as published in the New York Sun. L. M. Rhodes, Marketing Commissioner, presents some facts about Florida production, importation, consumption and exportation of Florida food and feed products that is an eye-opener. These and many other very valuable historical, statistical, and other information that has been compiled for the purpose of spreading the real truth about Florida.—Florida Light and Power Company Magazine.

### Turned Around

"New car, old top?"

"No—old car, new top."



Looking North Near South City Limits of Melbourne. Completed Surface Treated Base. Project 40-A.



## I Remember

I remember when I bought you,  
Little motor bus of mine,  
With your body like a mirror  
And your nickel all ashine.

You were kindred to the finest  
For your stock was over par:  
You were socially a climber  
And a splendid motor car.

Yes, you were a social climber,  
Quite the swellest I could find,  
And you made each hill at fifty  
With the hoi polloi behind.

But your social days are over  
And your stock has dropped from  
sight:  
Now you stagger up the hillside  
Like a college boy who's tight.

As a debutante I bought you:  
But I spurn you now, by heck,  
For a rattling, coughing rounder  
And a hopeless social wreck.  
—George Bancroft Duren in *The Maine Motorist*.

## READ THIS TWICE

Don't fight it out; think it out.  
Work is the greatest source of happiness.  
Selfishness is a sure sign of a low grade of humanity.  
It means nothing to live like a king and die like a pauper.

A man with no sense of responsibility is nothing but a kid in long pants.

The executive who keeps his men under strain lowers their efficiency.

It's no proof of independence to be destructive of the property of the employer.

The civilized man plans for the future; only savages and barbarians live from hand to mouth.

You progress by learning to work constructively; to live better; to think straighter.

Don't take yourself too seriously; the trained acrobat always comes up with a smile on his face.

Mental tension is like grit in the gears—it increases the squeak without increasing the power.

To understand the solution of a problem, you must first understand the problem.—*Georgia Highways*.

## BEGGING RIDES

It is a common sight on the highways nowadays to see one or more young fellows standing at the edge of the road, pointing their thumbs in the direction in which they want to travel, and hoping that some good-natured motorist will pick them up.

The automobile driver often feels very mean when he refuses such requests. If he has some empty seats in his car, it seems unkind to refuse to let some

struggling fellow cover the ground with him, when this favor will not cost him anything.

Yet all over the country we get reports of motorists who are held up by bandits who have asked rides in this way. No doubt many of these hold-up men were nice appearing and well dressed fellows, so that there was nothing in their appearance to suggest their crooked intent. Consequently a very large number of people are quite properly refusing to give rides to strangers.—*Lake Charles American Press*.

## "FLORIDA'S INVENTORY CONGRESS"

Under the auspices of the Florida State Chamber of Commerce, another state-wide conference was held at West Palm Beach, on April 16th, 1926, which probably will establish these conferences as an annual affair.

Here in West Palm Beach there assembled the leading business, professional, financial and industrial men of the state. Men who are giving of their time, money, brains and energy, unselfishly and unitedly in taking stock of the assets and liabilities of this great state, and to solve its great economic problems and work out a constructive program of operation that will strengthen Florida's resources and encourage greater expansion, development and prosperity. The citrus and agricultural resources; educational, recreational and civic resources; the river, harbor and lake resources; the transportation, distribution and highway resources. In fact all the resources of the state demand a careful, continuous study and a correct understanding to be thoroughly and adequately appraised.

Most people in Florida do not know Florida, her magnificent resources, her strategic position, her advantages and her possibilities. These conferences are developing into an important factor of Florida know thyself, and with knowledge there comes power. Power to speak out loud. Power to tell the real and convincing truth about Florida. Power that will command greater and still greater recognition nationally and internationally. Our hats are off to the men who conceived the idea and sponsored the Conference and to those who participated. Florida is fortunate in having you among her citizenry.—*Florida Power and Light Company Magazine*.

## To Be Exact!

The witness had been cautioned to give more precise answers.

"We don't want your opinion of the question," the judge told him. "We want it answered—that's all."

"You drive a wagon?" asked the prosecuting attorney.

"No, sir, I do not," was the decided reply.

"Why, sir, did you not tell my learned friend but a moment ago that you did?"

"No, sir, I did not."

"Now, I put it to you, my man, on your oath. Do you drive a wagon?"

"No, sir."

"Then what is your occupation?" asked the state's attorney, in desperation.

"I drive a horse," was the reply.



## FUTURE ROAD WORK

Contractors will be interested in the estimate of future work given by Thomas H. MacDonald, Chief of the U. S. Bureau of Public Roads. As a result of the combined efforts of the Federal, State and local agencies the annual improvement of United States highways will total more than 40,000 miles in his opinion.

In speaking of the present initial objective of the road building industry in the United States, Mr. MacDonald stressed the need for the immediate improvement of all roads included in the Federal Aid and State highway systems by widening, surfacing, and elimination of danger points.

"In this manner," he said, "we can promote the best interest of the nation at large, both in the matter of economy and the welfare of its industry. The increased traffic on our public highways has not only made their immediate improvement a matter of good policy for public convenience, but equally necessary to obtain the lowest possible cost of road transportation."—The Earth Mover.

## Possibly

The Mr.—"Do you think you can get out of that dress what you put into it?"

The Mrs.—"Oh, it's not so tight as all that."

Cop—"Here, you, you've been speeding!"

Stude—"Honest, officer, I've been sitting right here in the front seat of this auto all afternoon!"—Illinois Siren.

## PROGRESS OF DEPARTMENT'S WORK

(Continued from Page 5)

performance by mid-spring of 1927 unsurpassed in a like period by any State Road Department in the country.

Our organization has been tightened and there is really very little lost motion. The men and women in the office departments, as well as those in the field, are showing a co-operative spirit that is very commendable and one that is producing results.

Right-of-way difficulties continue to be our most serious handicap. The Chairman of the Department has given much of his time to County Commissioners in their efforts to solve their right-of-way troubles. The Department's Attorney has made frequent trips to counties in various sections of the state to advise with Boards of County Commissioners and their attorneys to assist them in expediting the securing of rights-of-way. The services of the engineering department has been placed at the command of Boards of County Commissioners and every assistance given to these Boards in an effort to help them to procure the necessary rights-of-way in their counties.

The Department is having the co-operation of Boards of County Commissioners and the citizens of the state in its efforts to speed up road construction and to give the state a fine system of hard-surfaced highways. This co-operation is appreciated and is absolutely necessary if the best results are to be obtained.

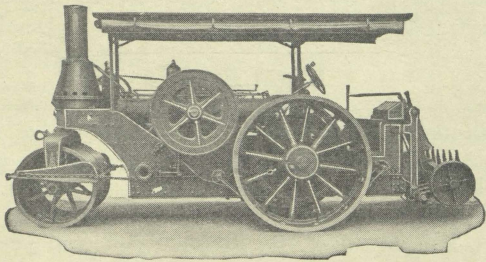
## Contracts Awarded by State Road Department January 1, 1926—May 16, 1926

Contractor	Project No.	County	Roads Length Miles	Bridges Length Feet	Contract Plus 10%	Type
Noonan-Lawrence .....	51	Escambia .....	6.28	....	\$ 206,595.89	Concrete
J. S. Walton & Co.....	648-B	Hardee .....	....	615	83,228.09	Conc.-Timber
Chas. F. Wilmore.....	641-A	Palm Beach.....	11.36	....	86,081.38	Grade
Gillis Const. Co.....	644-A	Wakulla .....	8.49	....	47,367.49	Grade
L. M. Gray.....	617-618	Alachua .....	16.06	....	248,123.10	R. Base
Montgomery & Parker...	633-B	Gadsden .....	....	240	39,591.47	Conc. Bridge
Peterson & Ernhart.....	672-B	Leon .....	....	1950	197,377.45	Conc. Bridge
Concrete Steel Bridge Co...	641-B	Palm Beach .....	....	237	120,766.80	Conc. Bridge
Concrete Steel Bridge Co...	656	Palm Beach .....	....	727	222,200.60	Conc. Bridge
American Bascule Bridge Corp. ....	641-656	Palm Beach .....	....	120	63,573.40	Bascules
J. W. Hall .....	689	Alachua .....	1.67	....	10,599.42	Grade
H. E. Wolfe .....	562-A	Highlands .....	5.37	....	142,837.33	S. T.
C. A. Steed & Son.....	694-694-A	Martin-St. Lucie ....	8.48	....	61,599.45	C. G. & G.
Boone & Wester.....	693	St. Lucie .....	8.73	....	59,670.88	C. G. & G.
Duval Engr. & Contr. Co...	31	Hamilton .....	11.82	....	241,489.11	R. Base
F. S. Whitney.....	642	Putnam .....	10.18	....	210,025.00	R. Base
Wm. P. McDonald .....	675	Polk .....	5.16	....	256,969.88	S. Asph.
Noonan-Lawrence .....	500-A	Bay .....	9.65	....	334,691.59	Conc.
R. H. H. Blackwell.....	693	St. Lucie .....	....	160	80,466.96	Conc.
C. A. Steed & Son.....	694-694-A	Martin-St. Lucie ....	....	327	125,796.52	Conc.
W. P. McDonald .....	648	Hardee .....	1.00	....	31,363.20	R. Base S. T.
Gilbert & Hadsock.....	676-A	Levy .....	9.95	....	48,875.58	C. G. & G.
McLeod Const. Co.....	676-B	Levy .....	14.39	....	135,259.30	C. G. & G.
Peterson & Earnhart.....	673	Gadsden .....	....	20	10,727.20	Conc.
Total.....			128.69	4396	\$3,065,277.09	



## BUFFALO-SPRINGFIELD ROLLERS

The choice of experienced  
engineers and contractors



Furnished in all weights and types—  
motor and steam propelled.  
Inquiries Invited.



The Buffalo Springfield Roller Co.  
Springfield, Ohio.



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Carey Elastite Expansion Joint does not deteriorate with time or storage. It will remain serviceable even under the most astonishing abuse.

The Philip Carey  
Company  
Lockland, Cincinnati,  
Ohio

**Carey  
Elastite**  
EXPANSION  
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OUR SERVICE ON

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and all other classes of Surety Bonds is unsurpassed.

**American Surety Company**  
of New York

Atlanta, Ga., Branch Office, 1320 Hurt Building.  
H. N. HUTCHINSON, Manager.

For P. M. Duty

Senator Ollie James told of a young man in Louisville who not long since hung up his shingle as attorney-at-law.

One afternoon a friend, upon entering the office, observed upon the desk of the new legal light a dollar alarm-clock.

"That's a good idea," said the friend. "One is very apt to oversleep these fine spring mornings."

The youthful attorney smiled sadly. "This alarm-clock was not bought for the reason you mention," said he. "I merely keep it here to wake me when it is time to go home."—Green Bag.

Ocala Lime Rock—Florida's Natural Road Material

**Ocala Lime Rock Co.**  
INCORPORATED

OCALA, FLORIDA

LIME ROCK QUARRIES

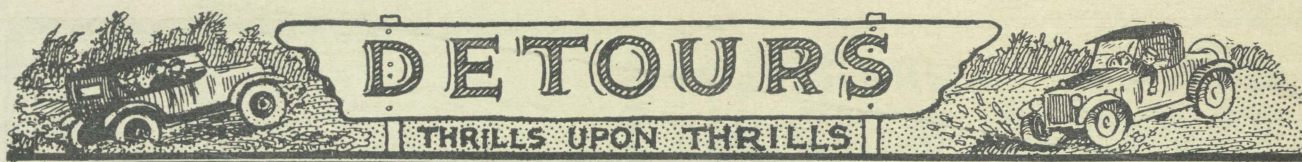
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Daily Capacity Plants, 4,000 Tons.

Office: Jones Building,  
Ocala.

Telegraph: Ocala. Phone 264.





### As the Twig is Bent

Eight men of four different nationalities were shipwrecked on a desert island.

The two Scotchmen formed a Caledonian Society. The two Irishmen fought all day, and most of the night. The two Englishmen passed each other by without speaking because they had not been introduced.

But the two Americans built a hut, started to make hooch in the cellar, organized a Chamber of Commerce, a Rotarian Society, and hung out a sign, "Choice Seashore Lots for Sale."—Texas Highway Bulletin.

### Heard in the Stable

He was trying hard to sell his horse. The animal looked sleek, but he was broken-winded. After trotting him around, the owner stopped him and spoke.

"Hasn't he got a lovely coat?"

"Yep, coat's all right, but I don't like his pants."

### Timely Advice

Down in Atlantic City a fellow was with a pretty girl. It was moonlight and the sea breeze was coming in. They sat down on a bench, and he finally got his arm around her, but then he became frightened. The girl didn't. They never do. He sat there and couldn't move.

"Well, why don't you kiss me?" she said.

"I can't," he replied, "I have sand in my mouth."

"Swallow it," she said. "You need it."—Badger Highways.

### Dirty Work at the Cross Roads

The night was dark and moonless; the wind sighed through the leafless trees. The autumn night was dank and chill.

"Is there no other way?" a sweet girlish voice from the car asked.

"No other way," answered a deep bass.

"Oh, I can't. Never, never, in this dark. It's awful! I, who am used to the straight road—I—I—I can't. Why, it's terrible! Isn't there some other way?"

"No other way," answered the deep voice again.

"Here, I will give you my purse, my rings—all of them if you do not ask me to do this terrible thing."

"No, young lady, orders is orders. This concrete isn't hardened yet. You'll have to detour."—College Comics.

### Dashing Off Verse

He stepped upon the high power gas,  
And down the road did whistle.

The coroner called a minister

To read the last epistle.

—Le Sinur Center Leader.

### All Wrong

"What do you mean by coming to a dance with me and then spending all your time in an alcove?"

"That wasn't no alcove—that was a Cadillac."—Princeton Tiger.

### Slight Error

Dinah had given her testimony to the judge, but on the next day returned.

"Jedge," said she, "does you all recollect how old I said I was yesterday?"

"Yes, Dinah," said the judge, "you said you were 45."

"Well, Jedge," she replied, "I made a mistake, that's mah bust measure, not mah age."—Nevada Highway News.

### Mostly on Strike

#### I WANT A JOB

I am thirty-five years of age, married man; commercial education and two years college, three years selling experience. Wont work mornings, afternoons or evenings.—Ad. in an Indiana paper.

She—"You drive awfully fast, don't you?"

He—"Yes, I hit 70 yesterday."

She—"Did you kill any of them?"

### There's a Reason

Two small girls were playing together one afternoon in the park.

"I wonder what time it is," said one of them at last.

"Well, it can't be four o'clock yet," replied the other with magnificent logic, "because my mother said I was to be home at four—and I'm not."—The Tatler.

### We've No Appetite for Either

Ask your doctor from which will you receive most nourishment—from poultry that has been killed from three to six months and packed on ice for the same length of time or from the farmer that is killed after you ordered it.—Circular of a Yonkers (N. Y.) poultry market.

### Unavoidable

Mary—"I hear that the shy Mr. Ruddy was in an automobile accident."

Jane—"Yes; Betty Cuddle crowded him off a country road."

Mary—"I didn't know she drove a car."

Jane—"She doesn't. She went for a ride with him."—Life.



## Reinforcing Bars for Concrete

Made in the United States  
from new billet steel.

Intelligent, dependable service  
by expert bridgemen.

### Dudley Bar Company

BIRMINGHAM, ALA.

Jack Camp, President. E. F. Fitch, Vice-President. Clarence Camp, Sec. and Treas.

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Capacity 1,500 to 2,000 tons daily. Quarry,  
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lantic Coast Line Railroad. Our product has  
been approved for all structural concrete and  
bituminous macadam.

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*Permanent roads are a good  
investment—not an expense*

## What the Bates Road Proved About Highway Paving

The story of the Bates Experi-  
mental Road, built by the highway  
authorities of Illinois, is one it will  
pay every taxpayer to know.

For the better part of two years  
fleets of loaded motor trucks  
passed over this road, transporting  
a total of more than 1,609,000 tons.  
Only thirteen of the original sixty-  
three sections of this two mile  
stretch survived. Ten were of  
portland cement concrete.

The other three had heavy con-  
crete foundations which in all re-  
spects corresponded to the plain  
sections of portland cement con-  
crete.

Many other sections with wear-  
ing surfaces placed on less endur-  
ing foundations were failures,  
proving that the foundation  
strength of concrete was the win-  
ning factor.

Many communities are profiting  
from the lessons taught by the  
Bates Experimental Road.

Is your community one of these?  
If not, why not?

Tell your local authorities you  
want your roads and streets paved  
with portland cement concrete.  
That will end once and for all the  
problem of costly maintenance.

*Send today for our free booklet—  
"Concrete Facts about Pavements"*

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JACKSONVILLE, FLA.

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Improve and Extend the Uses of Concrete  
OFFICES IN 31 CITIES



# Status of Road Construction

THROUGH MARCH 31st, 1926

Project No.	Contractor	Road No.	County	Total Length Miles	Clearing Miles	Grading Miles	Base Miles	Surface Miles	Type	Per Cent Complete
19	Duval Engr. & Contr. Co.	2	Hamilton	8.20			6.48	0.00	S.T.	69.00
37-D	Fla. Drainage & Const. Co.	2	Alachua	2.14	2.14	2.09			G.	98.00
40-A	C. F. Lytle	4	Brevard	16.17	16.17	15.68	14.07	0.00	S.T.	90.00
41	Morgan-Hill Paving Co.	4	Dade	12.00	9.40	2.94	0.00	0.00	S.A.	5.00
46	B. Booth & Co.	3	Nassau	11.52	11.52	11.52			G.	98.00
47	Boone & Wester	4	St. Johns	14.96	12.72	7.48			G.	60.00
48	A. J. Hoffman	4	St. Johns	15.39	8.92	3.08			G.	24.00
49	A. J. Hoffman	4	Flagler	13.81	0.00	0.00			G.	0.00
50-B	B. Booth & Co.	14	Putnam	9.77	4.40	1.96			G.	27.00
51	Noonan-Lawrence	7	Escambia	6.28	2.19	2.19			Conc.	9.10
514	State Forces	1	Jackson	11.04	0.00	0.00		0.00	S.C.	10.50
562-A	H. E. Wolfe	8	Highlands	5.37			0.00	0.00	S.T.	0.00
567	State Forces	1	Walton	21.35	21.35	20.28		19.43	S.C.	93.00
581	Barnes & Smith	5	Hillsborough	12.10	11.37	11.37	7.86	0.00	S.T.	76.00
586	Gillis Const. Co.	1	Jackson-Washington	17.37	17.37	17.37		14.00	S.C.	97.00
595	Strickland & Travis	3	Volusia	7.43	7.43	4.83			G.	66.50
597	J. Y. Wilson	4	Volusia	16.29	16.29	16.20	16.05	0.00	S.T.	98.00
607-B	Whitney Const. Co.	13	Clay	6.76	6.76	6.76	6.20	5.00	S.T.	95.00
613	Broadbent Const. Co.	5	Sarasota	4.62	4.62	4.57	1.15	0.00	S.A.	28.00
614	State Forces	5	Sarasota	17.07	4.00	1.60			G.	10.00
618	J. R. & J. B. Miller	5	Alachua	10.89	10.89	10.35			G.	94.70
621	Penton-Mathis Const. Co.	1	Okaloosa	17.35	11.10	5.21			G.	28.11
623	State Forces	35	Madison	12.91	9.04	9.16		0.00	S.C.	58.05
627	L. M. Gray	2	Putnam	6.27	6.27	6.27	0.00	0.00	S.T.	36.00
628	L. M. Gray	3	Volusia	9.92	9.92	9.92	9.92	9.92	S.T.	100.00
630	Meyer Const. Co.	8	Highlands	11.00			11.00	11.00	S.T.	100.00
631	C. P. Toulmin	1	Wash.-Holmes	8.53	8.10	1.71			G.	28.30
633	Taylor Const. Co.	1	Gadsden	9.61	9.61	9.23		5.28	S.C.	90.00
634	State Forces	1	Jackson	11.07	10.07	9.41		7.75	S.C.	77.80
636	C. F. Lytle	8	St. Lucie	12.81			12.81	12.81	S.T.	100.00
637	State Forces	10	Leon	18.08	18.08	18.08		15.37	S.C.	90.20
641	Chas. F. Wilmore	4	Palm Beach	11.36	2.67	1.47			G.	9.66
642	B. Booth & Co.	3	Putnam	10.82	10.38	10.38			G.	88.00
644-A	Gillis Const. Co.	10	Wakulla	8.49	0.00	0.00			G.	0.00
647	H. E. Wolfe	8	Highlands	7.00	7.00	7.00	6.50	6.00	S.T.	95.00
648	Federal Contr. Co.	2	Hardee	14.17	7.08	4.96			G.	35.00
649	Penton-Mathis Const. Co.	33	Okaloosa	10.42	10.42	10.00		4.00	S.C.	78.00
651	State Forces	10	Gulf	14.72	9.56	7.08		0.00	S.C.	27.30
652	Penton-Mathis Const. Co.	33	Okaloosa	9.04	9.04	9.04		.65	S.C.	75.00
655	H. E. Wolfe	18	Highlands	13.26	13.26	11.54	0.00	0.00	S.T.	25.00
657	State Forces	6	Jackson	10.00	5.00	4.00		1.50	S.C.	30.00
658	Meyers Const. Co.	1	Holmes	8.21	5.34	4.10			G.	45.80
660	B. Booth & Co.	3	Clay	10.52	5.00	1.90			G.	22.00
661	Sou. Paving Const. Co.	2	Lake	3.52	3.17	3.17	3.17	0.00	S.A.	50.30
663	Taylor Contr. Co.	5	Citrus	8.03	7.31	3.21			G.	28.18
666	State Forces	6	Jackson	6.52	6.52	5.50		4.50	S.C.	85.00
669	M. C. Winterburn, Inc.	27	Dade	10.32	10.32	9.91	0.00	0.00	S.T.	51.00
670	State Forces	6	Jackson	12.30	12.30	7.80		6.50	S.C.	48.00
672	State Forces	1	Leon	9.92	9.42	4.76		0.00	S.C.	60.00
673	State Forces	1	Gadsden	9.90	5.00	4.00		0.00	S.C.	30.00
679	Taylor Contr. Co.	5	Hernando	7.11	2.28	1.18			G.	9.10
682	Caye-Andrews Co., Inc.	5	Citrus	6.45	5.81	1.61			G.	33.00
689	J. W. Hall	5-A	Alachua	1.67	.20	0.00			G.	.10
Total complete March 31st, 1926					1436.28	1380.72	581.85	1100.09		
Complete month of March, 1926					36.59	36.49	8.70	49.13		
Total complete February 28th, 1926					1399.69	1344.23	573.15	1050.96		

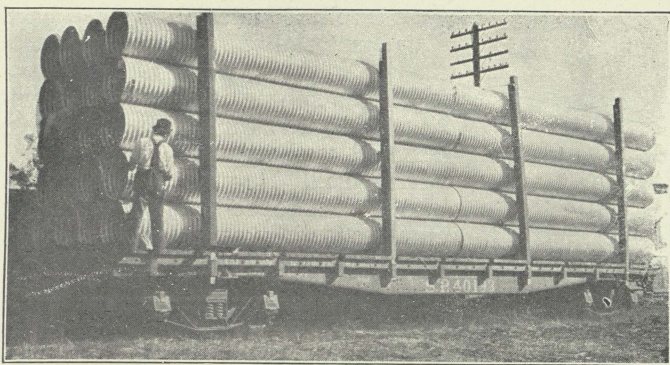
## TOTAL MILEAGE COMPLETE

	Concrete	Brick	B.C.	S.A.	B.M.	Asp. Blk.	S.T.	S.C.	Marl	Total
Complete February 28th, 1926	107.43	17.15	10.74	56.31	89.07	23.20	413.25	417.11	45.86	1,180.12
March, 1926	.16			.85			8.51	13.60		23.12
Total to date	107.59	17.15	10.74	57.16	89.07	23.20	421.76	430.71	45.86	1,203.24

Note—The above tabulation shows only those projects that are actually under construction at the present time and does not show projects that have been previously completed. However, the table, "Total miles completed," at the foot includes all projects that have been completed prior to March 31, 1926, and the amounts completed in March also. The abbreviations used are as follows:

C.—Concrete. S.A.—Sheet asphalt. B.M.—Bituminous macadam. R.—Rock base. S.C.—Sand clay. G. & D.—Graded and drained. S. T.—Surface treated. B.C.—Bituminous concrete.





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AS EASY  
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Foot for foot, ARMCO Culverts save 80% of handling cost as compared with the old type breakable culvert.

No delays from broken culvert sections when ARMCO Corrugated Culverts are used! Just roll in the sections, clamp over the three-bolt joints, and cover 'em up—and a **permanent** job is done! ARMCO Culverts have never failed to meet state specifications.

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\$12,000 a mile

An unbeatable combination for  
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**"ENSLEY" & "ALA CITY"**  
**BASIC SLAG**  
CRUSHED & SCREENED

Asphalt wearing surface on 8-inch  
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Hard surface, all weather highways of  
this type—in Marion County—cost  
only \$12,000 mile. Want  
the details? Drop us  
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*For better Roads*

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MOTOR TRUCKS  
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ROAD WORK**

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in Well Established  
Transportation Equipment

**DURABLE  
LOW-COST  
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OF AMERICA**

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"Florida has in its soft lime rock a very excellent material for road base. This material is cheap, compacts readily, is easily worked and is lasting. The supply is practically inexhaustible. The industry is adequately financed, well organized and efficiently managed. Its product is uniform. The present capacity of the lime rock quarries is given as 583 loads per day. About 5,000 men are employed.

"Good roads are necessary to Florida's development and this product is making such roads possible at a reasonable cost. Every engineer, county commissioner, city official or citizen having to do with the selection of the type of road or street to be built should carefully consider the advantages of using local Florida materials wherever possible, and thereby strengthening the industrial structure of his state and saving money for the tax payer."

We appreciate opinion such as this, both because of its being founded on widely experienced knowledge and because actual experience has shown that

*Lime Rock is the Life of the Highway*

**A**T that epochal meeting at Palm Beach recently—the "Florida Takes Inventory" Congress—good words were said for Florida lime rock and they were the words of a wholly unbiased expert, H. C. Mead, Chief Engineer in Florida for the American Cyanamid Company. Addressing his audience on the outstanding industries of Florida he mentioned lime rock as above.

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